

CLAIMS

What is claimed is:

1. A heat recovery circuit comprising:

an exhaust gas source;

a primary exhaust line in operative communication with said exhaust gas source and a heat recovery system, said primary exhaust line having a first connection point and a second connection point;

a by-pass exhaust line having a first end and a second end, said by-pass exhaust line connected to said primary exhaust line at said first connection point on its first end, and to said second connection point on its second end, said by-pass exhaust line being capable of receiving exhaust gas from said first connection point and conveying the exhaust gas to said second connection point;

a backpressure control system operatively connected to said primary exhaust line and selectively capable of reducing the pressure within said by-pass exhaust line to less than the pressure within said primary exhaust line; and

a flow control system capable of selectively directing exhaust gas flow through said by-pass exhaust line and through said primary exhaust line.

2. The heat recovery circuit of claim 1, wherein said flow control system is capable of directing the entire amount of exhaust flow received from the exhaust gas source through said primary exhaust line.

3. The heat recovery circuit of claim 1, wherein said flow control system is capable of directing the entire amount of exhaust flow received from the exhaust gas source through said by-pass exhaust line.

4. The heat recovery circuit of claim 1 wherein said flow control system is capable of directing a portion of the exhaust flow received from the exhaust gas source through said primary exhaust line and through said by-pass exhaust line.

- 1 5. The heat recovery circuit of claim 1, wherein said backpressure control system
2 includes a forced draft fan to motively urge fluid through said by-pass exhaust
3 line.
4
- 5 6. The heat recovery circuit of claim 1, further comprising an intake port that
6 provides for ambient air to be drawn into said by-pass exhaust line.
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- 8 7. The heat recovery circuit of claim 6 further comprising an ambient air flow control
9 system to control the flow of ambient air into said by-pass exhaust line.
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- 11 8. The heat recovery circuit of claim 1 further comprising an inlet by-pass valve
12 operatively coupled with said flow control system.
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- 14 9. The heat recovery circuit of claim 1 further comprising an exit by-pass valve
15 operatively coupled with said flow control system.
16
- 17 10. The heat recovery circuit of claim 1 further comprising an on-off valve disposed
18 within said primary exhaust line operatively coupled with said flow control
19 system.